Marin Travel Model

January 27, 2005

What is a Travel Model?

❖ **Identifies Existing Travel Patterns**

❖ **Projects Future Travel Patterns**

❖ **Includes Data from Entire Bay Area**

San Francisco Bay Area

Sonoma County
Napa County
Solano County
Marin County
Contra Costa County
San Francisco County
Alameda County
San Mateo County
Santa Clara County

0   15   30
Miles

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Overview

❖ **Five-Step Process**

1. **Land Use Data**

2. **Trip Generation**

3. **Trip Distribution**

4. **Mode Split**

5. **Trip Assignment**

Land Use Data

❖ **Land Use Data from County, Cities and Towns**

1. Number of Acres
2. Number of Households
3. Household Size (Average No. of Persons/HH)
4. Population
5. Household Income (Average)
6. Employed Residents (Workers)
7. Number of Jobs

Trip Generation

❖ **What kinds of trips do we produce or attract at each Traffic Analysis Zone?**
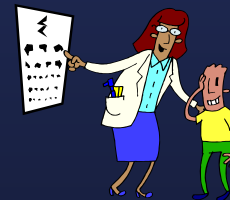
1. **Home-Based Work Trips (HBW)**

2. **Home-Based Shopping Trips (HBShop)**

3. **Home-Based Social/Recreation Trips (HBSocRec)**

4. **Home-Based School Trips (HBSchool)**

5. **Non-Home-Based Trips (NHB)**

Trip Distribution

❖ **Origins (Productions, e.g., Occupied Homes)**

❖ **Destinations (Attractions, e.g., Employment Locations)**

Mode Split

- ❖ **Drive Alone**

- ❖ **Car Pool**

- ❖ **Transit (Bus, Ferry, Rail)**

- ❖ **Bike**

- ❖ **Walk**

Trip Assignment

- ❖ **A.M. Peak-Hour Trips (Vehicles Per Hour)**

- ❖ **P.M. Peak-Hour Trips (VPH)**

- ❖ **Average Daily Trips (ADT)**

Model Consistency

❖ **The Marin Traffic Model is Consistent with the MTC Model.**

1. **Our "Households, Population, and Jobs" data individually varied less than 1% as required.**

2. **Our "Trip Productions" data varied less than 0.5%.**

Model Accuracy

❖ **How Does the Marin Traffic Model Data Compare with Actual Traffic Counts?**

1. **Example 1 – P.M. Peak-Hour Counts at Highway 101 North of Atherton Avenue:**

   ▪ **Our Model Differed by only 35 Vehicles out of 4,090 VPH (or, 1% Difference from Actual Traffic Count).**

2. **Example 2 – P.M. Peak-Hour Counts at Highway 37 East of Highway 101:**

   ▪ **Our Model Differed by only 0 Vehicles out of 2,616 VPH (or, 0% Difference from Actual Traffic Count).**

Next Steps

- ❖ **Update Land Use Data from County, Cities, and Towns**

- ❖ **Update with ABAG Projections 2003 and MTC 2003 Data**

- ❖ **Work with the Marin County Transit District to Provide Travel Data for Short-Range Transit Plan**